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I.—THE INTERPRETATION OF THE TIMAEUS.

I.

So entzückt uns denn auch in diesem Fall, wie in den Uebrigen, am Plato die heilige Scheu, womit er sich der Natur nähert, die Vorsicht womit er sie gleichsam nur umtastet und bei näherer Bekanntschaft vor ihr sogleich wieder zurücktritt, jenes Erstaunen, das, wie er selbst sagt, den Philosophen so gut kleidet.—GOETHE.

Dans les développements qu'il y donne, il me permettra de regretter que là, comme il lui arrive d'ordinaire en pareille matière, il se soit trop asservi aux formes philosophiques du jour, et que . . . il ne perce pas d'outre en outre, une fois pour toutes, ces expressions vagues et vaines, ces métaphores abstraites qui donnent un air de réalité à ce qui n'est que le nuage subtilisé du raisonnement.—SAINTE-BEUVE. Review of Rémusat's Saint Anselme.

If Mr. Herbert Spencer should turn from a perusal of Archer-Hind's deduction of the pantheistic idealism latent in the *Timaeus* to Jowett's brilliant but somewhat elusive essay on the philosopher of the fourth century B. C., or to Grote's faithful but barren summary, he would probably be confirmed in a scepticism similar to that which he has publicly expressed regarding the multiple meanings of Sanscrit roots. A work that, after exercising the ingenuity of commentators for two thousand years, still presents such Protean aspects to three disciplined modern minds, can hardly, he would argue, have contained any very definite or profitable meaning from the start. And his readers would doubtless readily acquiesce in this easy view. But those who, like Coleridge,¹ "have no insight into the possibility of a man so eminently wise, using words with such half-meanings to himself as must perforce pass into no mean-

¹ Biog. Lit. chap. XII.

ing to his readers," will be inclined to examine the conditions of the problem more closely and see whether they have ever really been complied with. The *Timaeus* is an admittedly obscure work, covering a vast range of topics, and composed in a style that combines many of the special peculiarities of poetry and philosophy. Much of its matter is obviously allegorical. Much of its expression is certainly colored by allusion to other utterances of Plato and his contemporaries. The full significance of such a composition can never be expressed in a series of metaphysical formulas, however happy. It can never be adequately rendered by mere literal translation into the misleading connotations of an alien vocabulary. It cannot be brought out by epigrammatic contrasts between the guesses of the primitive philosopher and the verified knowledge of the modern man of science. The work must be replaced in the medium where it grew. Its thought and feeling must be viewed through the moral, literary and religious atmosphere of its time. And all in its expression that strikes oddly on unfamiliar ears must be interpreted by definite and detailed comparison with other writings of the same author and age. It is not claimed that the following paper realizes this high ideal of an adequate historical, literary and psychological interpretation of Plato's great philosophic poem. My object is merely to avail myself of the occasion of the publication of Mr. Archer-Hind's convenient edition, in order to offer the English student of the three interpretations now open to him, some further aids to a full enjoyment and appreciation of a much neglected masterpiece. Of the three commentators referred to, Grote alone has assigned due weight to the influence of Plato's preconceived moral and religious ideas on his scientific statements. Jowett alone has brought out the fluid and purely literary character of many utterances which Grote accepts in bald literalness, and Mr. Archer-Hind allegorizes for the purpose of metaphorical construction. Mr. Archer-Hind alone has attempted to exhibit the philosophic framework which Plato has clothed with Pythagorean poetry and fourth-century science. For this he deserves all credit. But his exposition is based on the fatal misconception of the Hegelian school, that great works of the human spirit, whether in literature, art or action, can be adequately accounted for by abstract formulas. Instead of allowing the *Timaeus* to grow out of the dominant feelings, beliefs and literary methods of Plato's maturest time, he pieces it together out of a series of metaphysical propositions.

Each of the three chief pre-Socratics is made the symbol of an idea that is to be ingeniously dovetailed into the final formula of a Platonic creed. "And now," he says (Introd. p. 12), "we have lying before us the materials out of which, with the aid of a hint or two gained from Sokrates, Plato was to construct an idealistic philosophy."¹ But as a matter of fact the extant fragments of these philosophers do not supply us with such materials. Neither Mr. Archer-Hind, nor Zeller, nor Lassalle, nor anybody else, really knows whether Heracleitus' fire was a symbol or an element. We do not know the relative importance in Parmenides' doctrine of Being, of merely imaginative Pantheism on the one hand, and of the logical ambiguity of the copula on the other.² We are quite unable to reconstruct the true order of the cycles in Empedocles' Sphaerus, and we do not really know what Anaxagoras meant by his *νοῦς*. Plato makes these writers, as he does Protagoras, Gorgias, and Socrates, the dramatic mouthpieces of ideas he wishes to bring on the stage. It is impossible to say how far these ideas were really involved in their writings, how far they were due to the interpretative ingenuity of the Sophists and popular teachers, how far to the still subtler ingenuity of Plato himself. We can only do as Plato does, "let them go since they are absent," and take up the problems of the dialogues ourselves.

The abstract method, however, treats the chief dialogues as it does the pre-Socratic thinkers. Each is made the representative of one generalized barren thought, and these thoughts are then ingeniously combined in the framework of the Timaeus. The Sophist, we are told, frees us from ideas of relation, the Philebus from ideas of evil; the Theaetetus teaches us that material objects are the perceptions of finite souls. Even if we concede these more than dubious propositions to be true, this is to make literary criticism very easy. The Sophist and the Theaetetus, to any one who takes them in their entirety, are an effort to free Athenian dialectic from the logical cavils based, or assumed to be based, on the alternative philosophies of Being and Becoming. The Philebus

¹ This is the old method of Diogenes Laertius: *Μίξιν τε ἐποίησατο τῶν τε Ἡρακλειτεῖων λόγων καὶ Πυθαγορικῶν καὶ Σωκρατικῶν*.

² Mr. Archer-Hind apparently does not think that the ambiguity of the copula, the relation of *εἶναι* to *ὄντα*, expressions like *ὄντως* and *τῷ ὄντι*, and similar verbal trifles, have anything to do with that philosophy of Being among the Greeks, wherewith Hobbes, Bentham, Buckle, Mill, and Matthew Arnold have made merry.

is an attempt to refute a merely hedonistic ethic by means of a close psychological analysis of pleasure and pain, and by bringing the idea of good in human life into correlation with our conceptions of the order, design, and harmony of the cosmos. All these dialogues and many others are marked by a bitter polemic against materialism and ethical and religious scepticism. In order to express the heart and mind of Plato, then, as revealed in these writings, we must say, not that he undertook to reconcile Being and Becoming, which means just nothing, but that he endeavored to cut a clear path for logic through the maze of quibbles that the Sophists and clever young Athenians had created by playing with the catchwords of current philosophies. We must say, not that he undertook to construct a system of Pantheistic idealism, but that he employed all the resources of his consummate literary skill alternately in persiflage of dogmatic materialism and in lofty reprobation of outworn and immoral orthodoxies; not that he made the idea of Good the *summum genus* of a scheme of ideas, but that he intentionally confounded his highest ethical aspirations with his most beautiful cosmological imaginings, by symbolizing in the one word *τάγαθόν* his ideal of a reorganized society disciplined and guided for good, and his vision of the ungrudging goodness that created the heavens and the earth: *L'amor che muove il sole e l'altre stelle*. In short, before attempting to expound a systematic Platonism, we must recognize, and throughout our exposition we must bear in mind, that in Plato the instinct of metaphysical construction was controlled by two instincts at least equally strong, the fiery zeal of the moral reformer and the consummate skill of the literary artist. The form of expression and its ethical suggestions to other minds are quite as important to Plato as the thought. When Aristotle wrote the characteristic words *δεῖ μὲν οὖν σκοπεῖν καὶ τὸ πῶς δεῖ λέγειν περὶ ἕκαστον, οὐ μὴν μᾶλλον γὰρ ἢ τὸ πῶς ἔχει* (Met. 1030a, 27), he doubtless had his teacher in mind, whose principle and practice are expressed in the no less characteristic saying *τὸ μὴ καλῶς λέγειν οὐ μόνον εἰς αὐτὸ τοῦτο πλημμελές, ἀλλὰ καὶ κακόν τι ἐμποιεῖ ταῖς ψυχαῖς* (Phaedo 115 E).

This constant concern for the ethical suggestions of his language is too often overlooked by the interpreters of Plato. It is because, as Protagoras says,¹ it is safer for our whole lives to assert that some pleasures are good and others bad; it is because the law-giver by custom, praise and argument must persuade the youth

¹ Protag. 351 D.

that the seeming delightfulness of wrongdoing is a delusion (Leges 662 C); it is for these reasons, and not through logical confusion, as Grote thinks, that Plato in the Philebus insists on fastening the epithets false and true to pleasures, and refuses to employ the utilitarian formula that pleasure *qua* pleasure is the good. In these matters he thinks first of what it is best and safest to say, and secondly of what we actually believe or can demonstrate.¹ In fact, in default of proof, he would venture ἐπ' ἀγαθῷ ψεύδεσθαι πρὸς τοὺς νέους (Laws 663 D), regardless of Aristotle's warning that the simple truth is best not only for knowledge but for practice.²

Again, the would-be systematic expositor of Plato must beware lest his system lead him to exaggerate the dogmatism of his author. Cicero was nearly right in claiming Plato for an Academic Sceptic. It was only in essential matters of morals and religion that, like his great Roman admirer, he bade that froward academy be silent.³ The contents of dogmatic Platonism may almost be summed up in the single sentence ὡς χρὴ φιλοσοφεῖν καὶ ἀρετῆς ἐπιμελεῖσθαι.⁴ He will not insist on the doctrine of ἀνάμνησις and innate mathematical ideas.⁵ The supra-cosmic vision of the Phaedrus is perhaps a jest.⁶ God only knows the truth of the conceptions shadowed forth by the image of the quadripartite line and the strange prisoners of the cave.⁷ No sensible man will insist on the details of the eschatology of the Phaedo (114 D). The assurance of a God were needful to define with confidence the mortal and immortal part of the soul.⁸ The constitution of the Republic and Laws may be the true one, but we can say only that it is at least consistently worked out in conformity with a rational ideal.⁹ But amid all these doubts he never wavers in his conviction, that from thinking we ought to combat ignorance by strenuous effort, we shall be better and braver and less slothful than if we believe that it is not possible to find out nor needful to seek what we do not know.¹⁰ And he is as certain that morality is of the

¹ Philebus 28 E, οὐκ ἄλλως ἔγωγ' ἂν ποτε περὶ αὐτῶν . . εἵπομι οὐδ' ἂν δοξάσαιμι; cf. Sophist 265 DE, Laws 662-63.

² Eth. Nicom. X 1, 4.

³ De Leg. 1, 39: Perturbatricem autem harum omnium rerum Academiam, hanc ab Arcesila et Carneade recentem, exoremus ut sileat.

⁴ Euthyd. 275 A; cf. 278 D.

⁵ Meno 86 B.

⁶ Phaedr. 265 C, τὰ μὲν ἄλλα τῷ ὄντι παιδιᾷ πεπαῖσθαι.

⁷ Repub. 517 B.

⁸ Tim. 72 D.

⁹ Leges 812 A; cf. 641 D, 799 D.

¹⁰ Meno 86 BC.

nature of things, and that the just life is the happy life, as he is of the existence of the island of Crete.¹

But the maintenance of these two simple articles of faith brought him into conflict with two of the leading tendencies of his time: (1) Misology or logical scepticism engendered by the misdirected dialectical ingenuity caricatured in the Euthydemus and analyzed in the Parmenides, Theaetetus, and Sophist.² (2) Practical ethical scepticism as exhibited by Thucydides' aristocrats and defended by crude interpretations of materialistic philosophies of nature.³ Now, there is an element of truth in these philosophies of relativism and nature which Plato, for ethical and artistic reasons, attacked so bitterly—an element on which it is unnecessary to dwell after Grote's wearisome insistence—and Plato's own systematic thinking often brought him dangerously near his antipodes. His method in such cases is either to restate what seems true in the offensive doctrine, in an exactly reversed terminology, wresting the language of his opponents to higher uses,⁴ or to take refuge in the dream-land of myths. This is not the place to examine his dialectic from this point of view and show in detail how his paradoxical doctrine of ideas, so great a stumbling-block to those who do not recognize that it is the only alternative to a solution that Plato was resolved to reject at all costs, is logically simply a consistent reversal of the extremest form of associationist nominalism. Nor is there space to show how his ethic escapes the hedonistic calculus of the Protagoras only by Schopenhauer's pessimistic device of denying all positive value as pleasure to the satisfactions of our animal nature, of the appetite for life.⁵

But in order to understand the Timaeus, it is necessary to show how his preconceived ethical and religious notions, and his aversion to the form even more than to the substance of the materialism of Democritus, would color any picture he might attempt to draw of the universe as it appeared to the imperfect science of the fourth century B. C. For the Timaeus is to be studied as a great scientific poem, a hymn of the universe, rather than as a masterpiece of metaphysical exposition. It is not "the focus to which the

¹ Leges 662 B.

² Repub. 538, 539 BC; Phaedo, 89 C, 90 C.

³ Nubes 1427, σκέψαι δὲ τοὺς ἀλεκτρύονας καὶ τὰ ἄλλα τὰ βοτὰ ταυτί. Philebus, 67 B, οὐδ' ἂν οἱ πάντες βόες . . . φῶσι, etc.

⁴ Cf. infra pp. 405 and 414.

⁵ Cf. Protag. 356-7 with Leges 663 AB, 733-4, and Philebus 40 sqq. Especially 42 B, 44 C, 44 E, 45 E, 51 BCD.

rays of Plato's thought converge"; it is not the "inmost shrine of the edifice," but rather, as Jowett well says, a "detached building in a different style." We must not look to it for revelations of the inner meanings of the Platonic philosophy. Plato is the wisest of philosophic writers precisely because he had no philosophy, but only a method of philosophizing. And that method is to be learned mainly from the Theaetetus, Sophist, Philebus, and Phaedrus, which embody, as far as the lifeless written word can, the living play of dialectic between active unprejudiced intelligences. Studied by "fitting souls,"¹ these dialogues still generate the only philosophy outside of practical ethics and religion for which Plato greatly cared, the living power in an active disciplined mind to sift contrary opinions, and to deal with customary language as its master, not as its slave.² The Timaeus is merely the grandest of those literary digressions which Plato allowed himself when he laid aside for a time the discussion of eternal realities (methods of abstract reasoning) and enjoyed a relaxation that brought in its train no repentance, in hunting the trail of plausible conjectures about the things of generation. As in the Menexenus, Plato rewrites the typical Athenian funeral oration and charges it with moral meanings of his own,³ so, to compare great things with small, the Timaeus is his *περὶ φύσεως* or *περὶ τοῦ παντός*. But, as he himself says, all the greater arts require the stimulus of what the multitude would regard as idle and airy prating about nature,⁴ and his genius is more at ease amid the mighty movements of cosmic agencies than in devising consolations for the average Athenian. It was not to write the discourse of Agathon, the dramatic introduction of the Protagoras, or the splendid digression of the Theaetetus, that he trained himself in all the tricks of Isocrates, learned the art of words of Prodicus, and made himself master of every note in the compass of the Greek language. These easier and more obvious beauties are still *οὐκ ἀηδέστερα ἀκούειν*, not merely to the many, but to critics like Jowett and Matthew Arnold. But Plato himself would have said of such literary cleverness, *οὐ γὰρ δὴ . . . ὁμοδούλοις δεῖ χαρίζεσθαι μελετᾶν τὸν νοῦν ἔχοντα, ὃ τι μὴ πάρεργον*. His aim was rather *θεοῖς κεχαρισμένα λέγειν*,⁵ and the Platonic gods were well pleased with the inimitable dialectic subtlety of what Arnold calls "the barren

¹ Phaedr. 276 E.² Rep. 534 BC.³ Cf. 236 E, 237 A, 240 D, 246 DE, 248 A, and *passim*.⁴ Phaedrus 270 A.⁵ Phaedrus 273 E.

logomachies of the Theaetetus," and with the stately magniloquence worthily lavished on worthy themes which Jowett finds abrupt and clumsy in the Timaeus. Besides the grandeur of his theme, Plato had, to quicken and stimulate his literary talent here, a distinct sense of opposition to his models. There is, after all, no very deep ethical or philosophic contrast between the Menexenus and the Periclean or pseudo-Lysian funeral orations. But in setting forth his general conception of the universe and man's place therein, Plato was conscious of a distinct and typical antithesis between himself and the predecessors he sought to imitate or surpass. When men have passed out from the mythologic stage in which they ask not what is the cause of rain but who rains, there remain for thinkers but two typical cosmogonies: (1) That which treats the universe as a vast machine sufficiently explained when we have ascertained the mechanical laws of its action. (2) That which looks upon the cosmos as a living organism guided or informed by a purpose that bears some intelligible relation to man's ideas of order, beauty, and right. The Timaeus is the earliest and grandest statement of the teleological view outside of the Bible. But, as Lange and Benn, after Bacon, have recently shown, the opposite or mechanical interpretation of the universe had been constantly gaining in Greek thought from the time of Thales. In Empedocles it is but faintly disguised by the mythical garb. Empedocles is essentially an "esprit positif." As such he is commended by Renan and disparaged by Hegel. The *νοῦς* of Anaxagoras is hardly more of a spiritual force in physics than the God of the discreet and mechanical Descartes. In Democritus, whose influence is felt the more strongly throughout Plato that he is never named,¹ all disguises are thrown off. All other things exist *νόμφ*, in reality (*ἐτεῆ*) there exist only *ἄτομα καὶ κενόν*—"vanishing atom and void atom and void into the unseen forever." The issue of such a philosophy was to substitute *Δίνος*² for the avenging Zeus with whom Aeschylus and Plato sought to replace the lover of Leda and Alcmena; a redistribution of the atoms for that mystic journey to Cronos' tower or Lethe's plain which Pin-

¹ Cf. e. g. Democ. apud Diog. Laert. IX 7, 37, *Δόγος ἔργον σκῆ*, with Plato, Republic 473 A, *ἡ φύσιν ἔχει πρᾶξιν λέξεως ἥτιον ἀληθείας ἐφάπτεσθαι καὶ ν εἰ μ ἡ τ φ δοκεῖ*; cf. Tim. 55 D with Diog. Laert. IX 7, 44.

² Aristoph. Nubes 829, *Δίνος βασιλεύει τὸν Δι' ἐξέληλακώς*. Cf. Cratyl. 439 C, *οὔτοι αὐτοί τε ὥσπερ εἰς τινα δίνην ἐμπεσόντες κτέ.* Diog. Laert. IX 7, 45, *πάντα τε κατ' ἀνάγκην γίνεσθαι τῆς δίνης αἰτίας οὐσης*.

dar sang and the dying Socrates half ventured to affirm ; and *τύχη*, *τὸ αὐτόματον*, *συγκρίματα*, *ὄγκοι*, and *ῥύμαι*, and other ugly names for those Doric and Pythagorean ideas of order, harmony, system, right reason, and purposeful adaptation to ends which were as dear to Plato then as they have been to Carlyle, Ruskin, and Matthew Arnold in our own day. Nor was this the worst. In our time, the cant of the latest scientific philosophy, such terms as natural selection and survival of the fittest, is rarely wrested to intentionally immoral or sophistic ends, unless it be by German socialists or "les petits struggleforlifeurs" of Paris. In literature, at least, the radicals of the new doctrine profess their allegiance to all that is best in the old sanctities, while their opponents urge that they are logically bound to renounce it. This was not the case with the generation for whom Plato wrote. The Sophistic education had freed their spirits without giving them the command over themselves.¹ For the safe *ἀπειρία* of an earlier generation had been substituted, not the slow and graduated discipline of the Platonic state, but a *πολυπειρία καὶ πολυμαθία μετὰ κακῆς ἀγωγῆς*.² The young Athenians of the Peloponnesian war had learned enough rhetoric to try to make the worse appear the better reason, enough logic to refute anything that might be said, true or false,³ and enough physics to laugh at the invocation of *Ζεὺς ὄρκιος*.⁴ They had lost the moral sanctions of religion without throwing off its superstitions. They would no longer accept the word of moral truth from Delphi's rock or Dodona's tree,⁵ nor give credence to the myths which they had imbibed with their mothers' milk,⁶ but they still sought to purchase from heaven condonation of crime, and retained enough faith in the immoral parts of Hesiod's Theogony to cite scripture for their purpose.⁷ Their ideal of life was power and intellectual keenness subservient to boundless appetite.⁸ Their ethical theory

¹ "All which merely frees our spirit, without giving us the command over ourselves, is deleterious."—Goethe *apud* Matthew Arnold.

² Cf. Leges 819 A, and the startling *οὐδὲν γε ἐβλάβης* of ignorance of the arts 769 B, the similar treatment of literature 886 B, and the irony directed against *πολυπειρία* Tim. 19 E, 55 C, Repub. 557–58.

³ Euthyd. 272 A, *ἐξελέγχειν τὸ ἀεὶ λεγόμενον ὁμοίως ἂν τε ψεῦδος ἂν τε ἀληθὲς ᾗ*.

⁴ Nubes 1211: *καὶ Ζεὺς γελοῖος ὁμνήμενος τοῖς εἰδόσιν*.

⁵ Phaedr. 275 C.

⁶ Laws 887 D; cf. 881 A, *καταφρονῶν τῶν παλαιῶν*.

⁷ Laws 886 C, with Aristoph. Nubes 1080, *εἰτ' ἐς τὸν Δι' ἐπανεγκεῖν*.

⁸ Gorgias 492 A and passim; Repub. Bk. I; Theaetet. 176 C, with Rep. 519 A, and Schopenhauer's doctrine of the subservience of the intellect to the will.

was that of La Rochefoucauld in its crudest and most cynical form. Such at least was the opinion that Plato held in common with Aristophanes, Thucydides, and Isocrates.¹ And it was the belief, whether historically justifiable or not, that kindled in him the fiery moral and religious zeal of the Republic and Laws, and imparted to all his more elaborate works their characteristic and inimitable unction of style.

These harmful tendencies in the teaching and thought of his time Plato personified in the rhetorician, the Sophist, or the over-clever physicist, to whom he opposed the dialectician, the philosopher, or the true statesman. In his later writings the tendency grows upon him to seek the root of the evil in the decay of true religion, and its cure in religious reform. No man who really believes in the gods, he tells us,² can be guilty of impious crime, unless he thinks them either careless of mankind or corruptible by incense and burnt-offerings. Between the immoral ideas that have been handed down to us from the time *ὅτε περὶ θεῶν ἦν ἀνθρώποις διανοήματα πρῶτα*,³ and the materialistic scepticism of *τῶν νέων ἡμῖν καὶ σοφῶν* who came after, (*οἱ δεύτεροι*) his ideal legislator establishes the religion of Pindar, *ἐμοὶ δ' ἄπορα γαστρίμαργον μακάρων τιν' εἰπεῖν* (Olymp. I 52; cf. Leges 672 B), and of Aeschylus, *οὐκ ἔφα τις θεοὺς βροτῶν ἀξιοῦσθαι μέλειν . . . ὁ δ' οὐκ εὐσεβής* (Ag. 360, Leges 905 BC). But while he reprobates unworthy forms of religion equally with the rejection of all religion, it is the latter that chiefly engages his attention. The dogmatism and assurance that has always been held characteristic of materialists offended him.⁴ The picture of a mechanical universe was displeasing to his imagina-

¹ Cf., to take one parallel from many, the famous Corcyra passage, Thucyd. III 82, *τὴν εἰωθῆσαν ἀξίωσιν τῶν ὀνομάτων ἐς τὰ ἔργα ἀντήλλαξαν τῇ δικαίῳσει*, with Plato Repub. 560 D, 348 D, and Isoc. De Pace 31.

² Leges 885 B.

³ Epin. 988 BC; cf. Leges 886 BC.

⁴ Leges 881 A, *ὡς εἰδὼς ἅ ὑπδαμῶς οἶδε*; 905 C, *περὶ θεῶν ὡς οὐκ οἶσθα ὁ τι λέγεις*. Cic. de Nat. Deor. 8: *fidenter sane ut isti solent*. Sainte-Beuve on Tocqueville and Littré, *Causeries*, 8, p. 508. Plato uses *δεινός* ironically to characterize "the ability and pugnacity of the partisans of physical science," as he reserves *πάσσοφος* for his mock admiration of the *ἀντιλογικοί*. Cf. Phileb. 29 A, Phaedr. 245 C, *δεινοῖς μὲν ἄπιστος σοφοῖς δὲ πιστή*. *Δεινότης* is also used of the cynical Thucydidean ethics which Plato associates with the materialists. But as the wicked like to be called *esprits forts* (*ἀγάλλονται γὰρ τῷ ὀνειδεῖ*, Theaet. 176 D), Plato is careful to classify their cleverness as *ἀμαθία*—the ignorance that is aggravated by conceit of knowledge (Laws 689 and 886).

tion. And, above all, he had come to regard all forms of ethical scepticism and cynicism as ultimately traceable to the doctrine of the priority of matter over mind, taught by these clever men.¹ It was, he believed, in the school that taught "that as art and reason come from nature, nature cannot come from art and reason,"² that Callicles and Thrasymachus learned to contrast the grace of nature with the tyranny of human law,³ and thus to set in harmful opposition two terms whose suggestions ought to be blended in reason and the good.⁴ It was from hearing that matter and its movements are prior to soul and its movements,⁵ and that the gods exist *τέχνη οὐ φύσει*,⁶ that these advanced thinkers had come to regard human legislation as an art whose positions are not true,⁷ or true only as maintained by power in the interests of selfishness.⁸ To refute this scepticism, it was necessary to establish by argument, and maintain by consistent use of language, the priority everywhere of soul, art, design, and intelligence, to matter, chance, and blind nature.⁹ In a matter so essential to the welfare of society, the slightest show of plausible proof must be welcomed, and here, if anywhere, the lawgiver would be justified, as Emerson

¹ Leges 891 C, οἷον πηγὴν τινα ἀνοήτου δόξης ἀνευρήκαμεν. Cf. 886 AB.

² Cf. Martineau, A Study of Religion, Vol. I, p. 303, and Leges 889 C, τέχνην δὲ ὑπερὸν ἐκ τούτων ὑπέραν γενομένην.

³ Gorgias 482 E, 483 E; Repub. 344 C; Leges 890 A.

⁴ νόμος and φύσις are impressive terms, both of which Plato would enlist in the service of morality. Such phrases as χρῶ τῇ φύσει Nubes 1078, τῇ φύσει χρῆσθαι (Isoc. Areopag. 38), implying that the lower man is the natural man, are distasteful to him. Hence, while Callicles, after affirming the opposition of nature and human law, appeals triumphantly to the law of "nature red in tooth and claw" (Gorg. 483 E, κατὰ νόμον γε τὸν τῆς φύσεως), and the materialists affirm art, justice and religion to be mere conventions (cf. Leges 889 DE, and Critias apud Sext. Empir. IX 54), Plato endeavors to prove that the life approved by Callicles is *λυπηρότερος* . . . κατὰ φύσιν (Leges 734 A), asserts that law, art, and religion exist *φύσει ἢ φύσεως οὐχ ἥττονι* (Leges 890 D), defines law as *τὴν τοῦ νοῦ διανομήν* (Leges 714 A), and declares that the very term *φύσις* (*ἣν οὐκ ὀρθῶς ἐπονομάζουσιν αὐτὸ τοῦτο*, Leges 892 B) belongs to the soul which is *natura naturans*, rather than to the visible body of the *natura naturata*.

⁵ Leges 897 A, Epin. 988 C.

⁶ Leges 888 E, with Critias apud Sext. Empir.

⁷ Leges 889 E, ἥς οὐκ ἀληθεῖς εἶναι τὰς θέσεις.

⁸ Leges 715 B; Rep. 338 E, θέμεναι δὲ ἀπέφηναν τοῦτο δίκαιον τοῖς ἀρχομένοις εἶναι τὸ σφίσι ξυμφέρων. Theaet. 177 D, ἃ ἂν θῆται πόλις δόξαντα αὐτῇ ταῦτα καὶ ἔστι δίκαια τῇ θεμένῃ.

⁹ Leges 891-2, 966 E, Tim. 34 BC, 33 D, ἐκ τέχνης γέγονεν.

says of Plato, in "playing providence a little with the vulgar sort." ¹ The teleological view of nature, then, was not merely consonant with Plato's intellectual beliefs and imaginative sympathies (Phaedo 97 E)—it was a fundamental ethical postulate of the lawgiver, to be maintained at all costs. The mark of that view, as Martineau, the ablest of its recent defenders, shows, is the explanation of the universe by means of the higher rather than the lower elements in the constitution of man. The simplest statement of this analogy, borrowed from Xenophon's *Memorabilia*,² is to be found in Socrates' question in the *Philebus* (30 A): Whence came the soul in our bodies unless the body of the all has a soul? But to appreciate its full moral significance in Plato, we must read again the fine passage of the *Phaedo* where Socrates, criticising the philosophy of Anaxagoras, and discriminating between causes and conditions, declares that the true cause of his presence in prison is his own conviction of right, immortalized in the *Crito*, and not the structure of his body or the physical force that holds him in his narrow cell. The detailed application to the universe of this view of causation, in antithesis to the prevailing mechanical theories, is suggested but not attempted there. The theory of ideas offers a safe and non-committal position between the two extreme doctrines.³ For the theory of ideas is logically nothing but the substitution of the ground (*causa cognoscendi*) for all other conceptions of cause, final or mechanical. And though the language of the doctrine conveys spiritual rather than materialistic suggestions, it does not, if carried out with unflinching consistency, commit us either to final or mechanical causation. There is no reason for assuming that Plato ever receded from this position. He always felt that the mechanical explanation of the world put forth by the science of his time was vulnerable. He always recognized that the teleological interpretation of things belonged rather to the world of poetry and aspiration than to that of exact thought, and for this reason his main intellectual effort was spent in working

¹ Cf. *Leges* 887 B, διαφέρει δ' οὐ μικρὸν ἄμῳς γέ πως πιθανότητά τινα τοῖς λόγους ἡμῶν ἔχειν, etc.; cf. 890 D, εἴπερ τυγχάνει γε οὐσα καὶ μικρὰ πειθῶ τις περὶ τὰ τοιαῦτα, etc.; cf. 663 B, πιθανός γ', εἰ μὴδὲν ἕτερον; 663 C, καὶ πείσει ἄμῳς γέ πως; cf. 664 A, παράδειγμα τοῦ πείσειν ὃ τι ἂν ἐπιχειρή τις πείθειν τὰς τῶν νέων ψυχάς, etc., with *Repub.* 414 C, γενναῖον τι ἐν ψευδομένους, etc., and 415 CD.

² I 4, 8; IV 3, 14.

³ *Phaedo* 100 C, οὐ δύναμαι τὰς ἄλλας αἰτίας . . . γινώσκειν. Cf. 100 D, ἀσφα-
λέστατον.

out psychological and dialectic problems of method with the non-committal language of the theory of ideas.

But it was natural that he should make one attempt to fix in words the vision of creation in which his imagination sought refuge from the vortices of Democritus, and that attempt, owing perhaps quite as much to the unique conditions of the time as to the genius of the author, issued in a consummate literary masterpiece. The brilliant guesses of the Ionian physicists supplied him with all the general conceptions that we have to-day, while his imagination was not checked by the immense body of verified fact of which modern science requires the constructive philosopher to take account. It was still possible for a gifted amateur to speak with authority. He could still argue with confidence that all attempts at a history of creation were merely guesses at truth, and that his guesses were quite as consistent as those of his opponents, and infinitely more beautiful. The verified detail of science makes it impossible for the modern controversialist to compose an alternative picture to the universe of Haeckel or Spencer. And modern chemistry and biology force a Martineau back upon subtler defenses than the defiant assertion that he who attempts creative synthesis and analysis ignores the difference between man and God (Tim. 68 D), or the naïve suggestion that nails and hair were given to man in prevision of his degeneration into animals needing claws and fur (Tim. 76 DE). The modern can only murmur with trustful hope "behind the veil, behind the veil," where Plato could boldly affirm. For these reasons, and on account of the incomparable splendor and majesty of its diction, the *Timaeus* will probably remain the finest statement of the teleological idea in literature. It is certainly the most important document for the history of philosophy. The Stoic world-soul, and the Aristotelian *primum mobile*, self-centred in cogitation of itself, are derived directly from the conceptions of the *Timaeus* and the *Laws*. From this source Cicero and Seneca drew their pictures of the universal order revealed to the gaze of the newly emancipated soul after death.¹ To the Neo-Platonists it was a sacred text, every letter of which was charged with mystic meanings. Its suggestions and its very phrases haunt the memory of every one of the Greek fathers with the slightest pretensions to literature. Through the translation of Chalcidius and the commentary of Macrobius on the dream of Scipio, it was the chief source of the mystic and

¹ Cic. *Somnium Scipionis*; Seneca, *Consol. ad Marciam* in fine.

pantheistic tradition of the middle ages.¹ After the revival of learning it became the Bible of those fiery renaissance spirits whose intellects rejected the catholic interpretation of Aristotle, and whose imaginations found no satisfaction in Epicurus. Through Philo Judaeus, Origen, and the long series of Hexaemera from St. Ambrose to Abelard, its poetic and religious symbolism was imported into the interpretation of the book of Genesis, so that the two cosmogonies were fused and blended in the consciousness of medieval Christendom, as the Miltonic and Biblical cosmogonies in the imagination of Puritan England.

But the modern scholar who cares little for the history of ancient and medieval philosophy finds the *Timaeus* repulsive and obscure. It has now become almost a commonplace of criticism to contrast the flexible beauties of Plato's Socratic style with the rigid monotony of his later elaborate manner. That Grote should see in the *Timaeus* only a foil to the superior brilliancy of the *Republic*, and that John Stuart Mill should be repelled by "the fog of mystical Pythagoreanism in which the noble light of philosophy in Plato was extinguished," is natural. They had too little feeling for imaginative style, and were too much preoccupied with modern polemics to understand anything of Plato's later work. And the *Timaeus* in Grote's summary hardly makes a better showing than in the sapient *résumés* of Draper and Bain. But when a scholar like Campbell finds in the *Timaeus* "a labored march in the dialogue and a degree of confusion and incompleteness in the general design," one asks in amazement whether he can ever have read the work aloud and felt the swift bounding rhythm of the pregnant sentences, whether he has adequately considered the nature of the literary problem involved in the attempt to condense into ninety pages a teleological cosmogony and an enumeration of the chief results already won by nascent Greek science. It is comparatively easy to be at ease in lauding love to youthful enthusiasts, as in praising the Athenians at Athens (*Menex.* 235 D), but to put soul, life, movement, and organic unity into the enormous mass of subtle thoughts and concrete details of the *Timaeus* required a far different and not less noble "art of words." It is time for our literary criticism of Greek style to emancipate itself from the Dionysian canons that would confine all artistic speech within the intellectual limits of an average Athenian audience. The urbanity that was the ideal of Dionysius of Halicarnassus, of Pollio, and of

¹ Hauréau, *Histoire de la Philosophie Scholastique*, 1872, Vol. I, p. 92.

Sainte-Beuve, is an exquisite thing. But it is as unreasonable to censure Plato for not contenting himself with the Attic simplicity and *πλουτος κυρίων ὀνομάτων* of Lysias, as to expect Tacitus to write in Ciceronian periods, or Renan and Victor Hugo to confine themselves to the vocabulary of Racine and Madame de La Fayette. The problem of style in the *Timaeus* was not by lightness of touch and dramatic vivacity to bring down a great theme to the intelligence of readers who had no part in the ways of discipline whereby such things must be set forth (*Tim.* 53 C); but to lend unity, dignity, and rhythm to what in other hands would have proved a mass of jarring and discordant details. Unity, speed, moral unction, and religious awe are the keys to the art as well as to the thought of the *Timaeus*. *Εἰ δέῃ δι' ὀλίγων περὶ μεγίστων ὅτι τάχιστα ῥηθῆναι* (*Phileb.* 31 D) is its motto. The swift resonant periods flow on through the strophe of design and the antistrophe of necessity, to the epode of the glory of the cosmic God, almost with the movement of a Pindaric ode. And if the unavoidable details of the physical constitution of the elements and of animal anatomy and pathology threaten sometimes to mar the stately harmony of the whole, they yet serve, like Pindar's enforced enumerations of the victor's trials and triumphs, to give us a sense of truth and of fidelity to realities. Unity and speed are attained by frequent rapid anticipations and parallelisms of expression,¹ back references,² and *résumés*³ which, as it were, by invisible *γόμφους* (43 A), combine the discordant elements into an organic whole; by a subtle and discriminating use of the particles;⁴ by the

¹ 27 A; 17 D-70 B; 49 C, *ὥς δοκοῦμεν*-51 C; 31 A-55 D; 30 C-39 E-41 C-92 B; 37 C-46 D; 41 C-69 CD; 43 A-80 E; 42 B-91; 57 AB-69 AB.

² 90 E, 28 C, 40 B, 65 C-59 E, 72 D-69 C-61 D.

³ 48 AE, 61 D, 64 A, 69 AB.

⁴ I have not been able to find any instances of the unmeaning employment of the particles, of which Jowett complains. Very characteristic is the use of *ὃν οὖν* and *αὖ*, the force of which is repeatedly ignored in Jowett's version. Throughout the dialogue, purposes, preliminary conditions, and right methods are first generally stated, and conformity, result, and specific application follow in sentences introduced by *ὃν*. *οὖν* frequently supplies the transition from a general distinction or principle to its specific application with *ὃν*, and *αὖ* introduces a second or parallel condition, or a second step in the process of application; cf. the instructive page 27 D-29 B, where not a particle can be spared, though Mr. Archer-Hind has ignored some, as *οὖν* 28 B, *αὖ* 28 C, and Jowett nearly all. Cf. also 53 D-54 B, especially 53 D, where translators have gone astray through missing the full force of *δεῖ δὲ* and *τοῦτ' οὖν*; cf. my note *ad loc.* For *ὃν* cf. further 29 A, D, E; 30 B, 33 A, 34 A, 39 DE, 40 B, 45 A, 47 A

frequent employment of concrete linked participial constructions;¹ and by an occasional well-calculated abruptness relieving the monotony of an uninterrupted Isocratean rhythm.² Moral and religious unction are secured by a conscious discrimination of

δψις δὲ, 48 B, 51 E, 53 E, 64 BC. οὖν, besides its familiar transitional and illative force, is employed impatiently in sense of *at any rate*, or *ut ut haec res se habet*, to mark the one point to be considered in a subject otherwise abandoned; cf. 28 B, 38 E, 50 C, 54 A. From this use it passes to the meaning "for that matter," 65 C ὥσπερ οὖν τὰ πολλὰ, and so to a full regretful (84 E) or concessive use: 48 A, 77 B πᾶν γὰρ οὖν; cf. Symp. 180 E. The frequency of τε combining two substantives has been observed by Prof. Gildersleeve on Pind. Olymp. IX 43, with the perhaps fanciful suggestion that it is due to Timaeus being an Epizephyrian Lokrian. It serves for speed in enumeration and description.

¹ Prof. Campbell, *Soph. and Statesman*, p. xxxvi, has noticed the frequency of participial constructions in Plato's later style. Such expressions as ὑπῆρξε . . . ἡ γένεσις οὐκ ἐπὶ ἄλλῳ οὐσα (Menex. 237 B), so distasteful to Dionysius of Halicarnassus, constantly recur in the Laws, Sophist, etc. The Timaeus is polymetochic and pyknometochic beyond any other Platonic composition, and, if I can trust a hasty count, offers more participles to the page than any other important work in Greek prose, though Isocrates often maintains as high an average for several pages. This is due partly to the use of the participle with the auxiliary verb (cf. 30 A εἶη . . . ἀπειργασμένος, 31 B, 77 D εἶη διαδιδόμενον, 77 E), partly to merely redundant or explicit use of participle (47 E, 66 C, 89 B), partly to the concrete Latinism of λογισθεὶς λόγος (cf. 37 E, 52 D; cf. 51 D ὅρος ὀρίσθεις; cf. 24 A, 25 D), partly to complicated constructions with παρέχειν, ἀποτελεῖν and γίγνεσθαι (79 E, 83 D, 88 E-89 A; 44 B, 58 C, 74 B, 77 D), but mainly to description put in the form of action and process; cf. 38-39, 62-63, 65-66, 68, 71, 74, 81, 84, 85, etc.; cf. in particular 63 E, 66 C, 68 A, 77 D, 80 E, 89 B, 33 C, 57 C.

² This is what Jowett complains of as the putting of sentences side by side; cf. 28 A; 28 B γεγόνεν; 29 E ἀγαθὸς ἦν; 31 A ἐνα, cf. 51 E δύο; 33 A πρὸς δὲ τοῦτους, cf. 38 B, 57 E; 33 C οὐδὲ γὰρ ἦν; 39 E; 60 B γῆς δὲ εἶδη. These are but a few of the devices whereby the swift-linked harmony of the Timaeus is produced, and the impression is conveyed of rapid pregnant treatment of a great theme; cf. 51 C, 55 D, 69 AB, 38 D, 80 E, 89 E. Compare the use of genitive absolute noted at 87 A, the uses of the cases at 81 A, the pregnant use of οὕτως, οὕτω δὲ, κατὰ ταῦτα and similar expressions to sum up a series of conditions. For the rest, every device of the rhetorician is employed to give emphasis and impressiveness to the style: Antithesis, 21 A, 41 B, 55 C; juxtaposition of associated words, 18 D, 22 B, 24 D, 29 C εἰκόνας—εἰκότως, 29 E ξυνιστάς ξυνέστησεν, cf. 30 C, 33 C, 30 B ὅλον ὅλον, 34 B, 74 B, 77 A, 86 D; alliteration, 22 D πῦρ πολὺ, 52 D, 50 D and passim; chiasm, 38 D, 59 CD ὄντων—εἰκότας, 37 A, 37 D. The most noted feature of the whole, perhaps, is the Ciceronian device of interposing unemphatic and uninflected words between emphatic and inflected words, so as to avoid the monotony of like endings and give to every word the most emphatic position consistent with the harmony of the whole. A detailed commentary would be needed to illustrate this.

synonyms,¹ by a subtle use of the particles, by pregnant use and emphatic positions of qualifying adjectives and adverbs,² and by a never-failing Aeschylean grandeur of poetic diction.³ But the chief artistic instrument of the Timaeus is the Demiurgus. He is no abstract metaphysical principle. He is an embodiment at once of Plato's favorite conception of artistic purpose as opposed to lawless chance or arbitrary convention, and of the purer monotheistic aspirations which the great religious poets of the preceding generation had associated with the name of Zeus. He is the scientific workman of the Cratylus, the *aίτια* of the Philebus,⁴ the *ἐντεχνος δημιουργός* of the Laws (903 C), the *τεχνίτης* implied by the *θεία τέχνη* of the Sophist, the supreme *χειροτέχνης* of the Republic (596 C), who made all other things and also himself. But he is all this conceived no longer as a vague abstraction, but as a true God, *mundi melioris origo*, who has checked the violence and injustice that prevailed in the world,⁵ διὰ τὴν τῆς ἀνάγκης βασιλείαν (Symp. 197 B), and by the power of wise persuasion (ὑπὸ πειθοῦς ἔμφρονος, Tim. 48 A) has partly redeemed things from the dominion of chaos and ancient night. And he is also the Lord of heaven and earth, who abideth in unchanging unity,⁶ untouched by the blasphemies of anthropomorphic poets;⁷ the moral ruler of the universe, whose eye no evildoer shall escape though he take the

¹ 28 B δέχοιτο, 40 A κόσμον ἀλήθινον, 90 C εὐδαίμονα, 37 C εὐφρανθεῖς, 80 B εὐφροσύνην, 25 C ἀφθόως, cf. ἄθυμος, Leges 368 A; 85 B ἱερόν, cf. 45 A, 67 D εἰκός—ἐπιεικῇ; cf. further for moral tone of Timaeus 29 E, 33 D, 34 B, 48 D, 53 B, 53 D, 54 A, 59 D, 60 E, 68 E, 69 D, 68 B, 72 A, 75 C.

² 52 C ἀληθῶς φ ὅ σ ι ν ὑπάρχουσιν, cf. Leges 892 B; 37 C οὐκ ὀρθῶς, 34 C νεωτέραν and passim.

³ Cf. 22 B, 28 C, 37 E—38 A, 40 BC, 41 ABC, 42 E, 47 AB, 52 B, 68 E, 69 CD with Swinburne's "Before the beginning of years," 70 C, 71 A, 90 A, 92 B; cf. especially such phrases as μάθημα χρόνῳ πολλῶν 22 B, λόγων ἐστίασιν 27 B, μονογενὴς οὐρανὸς 31 B, δεσπότην 34 C, θείαν ἀρχὴν ἀπαύσιτον—βίον 36 E, πτηνὸν καὶ ἀεροπόρον 40 A, ἀθάνατον ἀρχὴν θνητοῦ ζῆον 42 E, 69 C, ὕργοις τε ὀλισθήμασιν ὑδάτων, etc. 43 C with the famous periphrases of Aesch. Persae 612—15 and those in 60 A, φωσφόρα . . . ὄμματα 45 B, βραχυόνειρος ὕπνος 45 E, γράμμασιν ἀφάνους 23 C, ὑβρεὶ πορευομένην 24 E with Soph. O. T. 883, τιμαλφέστατον κτῆμα 59 B, ἀμεταμέλητον ἡδονὴν 59 D, λόγων νᾶμα 75 E, δξνήκοον αἴσθησιν 75 B, ἡμῶν—ὁ κηροπλάστης 74 C.

⁴ 27 A, τὸ δουλῆον εἰς γένεσιν αἰτία. Cf. 27 B, where αἰτία is replaced by τὸ . . . δημιουργοῦν; cf. Tim. 29 A.

⁵ Polit. 273, ὅσα χαλεπὰ καὶ ἄδικοι ἐν οὐρανῷ γίγνεται.

⁶ Tim. 42 E, where ἡθεῖ is characteristic, and 37 D.

⁷ Leges 901 A, θεὸν οὐ ῥητέον ἔχειν ἥθος τοιούτων, etc.; cf. Timaeus 29 E, Phaedr. 247 B, and Repub. passim.

wings of the morning or dive to the uttermost depths of the earth ;¹ the well-wishing but awful judge, who hath set man's feet on the way of wisdom,² made him the arbiter of his own fate,³ and established forever the law of learning through suffering and of woe for the worker of evil.⁴ By his operation and that of his created ministers, description is, in accordance with the precept of Lessing, transformed into action ; the causal relations of things are revealed to us as the preconceived purposes of God contending with the limitations of necessity ;⁵ anatomy is transfigured into a poetical making of man before the beginning of years (69 CD, 42 E), and pathology into an ethical lesson.⁶

But what were the thoughts on which Plato lavished this stylistic ingenuity? And what is their significance for us? I cannot better conclude this general introduction to my exegetic notes, which will appear in the next number of this journal, than by a brief presentation of the leading ideas of the *Timaeus* as I conceive them, stripped of their mythologic garb and rendered into an explicit modern terminology. Such a summary, of course, must not be pressed too closely. It is designed as a clue to the perusal of the *Timaeus*, not as a substitute therefor. It may at least assist a few readers who desire some compromise between the allegorical tenuity of Archer-Hind's revelation that "blueness is the mode in which the good reveals itself to the faculty which perceives blue," and the literal list of scientific absurdities complacently recited by Grote, Draper, and Bain.

In this attempt to restate Plato's thoughts we have to guard rather against underrating than overrating the intelligence of their author. Recent criticism amply proves that the difficulty for us is, not to realize the extreme naïveté of the early thinker face to face with nature and her problems, but rather to understand how his profound insight was compatible with the obvious ignorance of facts known to every modern schoolboy. Jowett's clever paper on the aspect which nature wore to a Greek philosopher of the fourth century B. C. will probably to many readers seem to

¹ Laws 915 A, οὐχ οὕτω μικρὸς ὃν δύσκει κατὰ τὸ τῆς γῆς βάθος, etc.

² τὸν φρονεῖν βροτῶνς ὁδῶσαντα, Aeschyl. Ag. 176; cf. Tim. 47 AB, 42 BC.

³ Tim. 42 D, Repub. 617 E, Laws 904 C.

⁴ Republic 619 D, 620 CD, Laws 728 CD.

⁵ 30 A, 32 B, 37 D, 38 B, 42 E, 46 C, 48 A, 53 B, 56 C, 68 E, 69 B, 71 D, 75 AB.

⁶ 86-87 B, Plato seems to believe with Diderot that precepts of medicine are precepts of morals.

touch lightly the just mean between the allegorical mysticism of the Neo-Platonists and the credulous literalness of Grote and his followers. But it will mislead the student of Timaeus. The naïve philosopher depicted by Jowett is an ideal compound of Thales, Empedocles, Heraclitus, Parmenides, and the modern physicist's *a priori* unhistoric conception of the thoughts of a man who believed that the sun moves around the earth. It is not Plato. Plato was not incapable of resisting an analogy, but repeatedly and expressly warns us against the trusting to mere analogies. He did not realize abstractions in the only logically objectionable sense of realizing some abstractions without realizing all. He was not the victim of words and their analogies. There is no verbal paralogism in all Plato that is not either (1) obviously intended as a dramatic lesson in logic, or (2) accompanied by a sufficient hint that the speaker is resolved to make a show of proof at all hazards. He was not a Pythagorean mystic who assigned magical properties to numbers. His mathematical analogies are either mere stylistic playfulness, or they are the natural adoption by a great thinker of the terminology of the foremost and most progressive science of his age. These propositions admit of demonstration. Here I must be content with assertion.

The judicious student, therefore, while he will not seek in the Timaeus for anticipations of the Copernican astronomy, of the circulation of the blood, and of the discovery of the synovial glands,¹ need not be surprised at the modern tone and the logical coherence of the following summary of its leading general conceptions:

Cosmogony, psychology, and physics admit only probable and approximate statements,² as contrasted with the accuracy of pure dialectic³ and the conscious certitude of moral truth.⁴ We should

¹ Cf. Martin on 70 B and 74 A.

² 48 D, 59 C, 56 A, 68 D, 44 D; cf. Repub. 530 AB, a notable anticipatory protest against the rigid dogmatism of Aristotle's *de Coelo*.

³ Philebus 58 BCD, Repub. 511 C, 533 B, 499 A.

⁴ Grote, 2d ed., IV 218, contrasts the modest pretensions of the Timaeus with the to him distasteful confidence manifested in the Republic, where a herald is hired to proclaim the conclusion (580 BC) and the "overbearing dogmatism of the Laws." But he fails to observe that this dogmatism is limited to the triumphant assertion of moral faith; cf. *Leges* 662 B, *Phileb.* 67 B, *Phaedo* 72 E, *Apol.* 30 D. The word *ἀδαμάντινος* expresses the difficulty of preserving this faith and the absolute assurance of its happy possessor; cf. Repub. 360 B, 618 E *ἀδαμαντίνως*, *Gorgias* 509 A *σιδηροῖς καὶ ἀδαμαντίνους λόγοις*.

approach these great and uncertain themes with a reverent sense of our limitations as beings of "dim faculties and bounded knowledge,"¹ and our chief prayer in beginning should be to speak things pleasing to the gods.² Here, as everywhere, we are confronted with the fundamental antithesis between mind and matter, purpose and mechanism, the good and the necessary, the permanent intelligible and the transient sensible.³ A probable cosmogony will have to admit⁴ the operation of both of these factors in the generation of the universe. But the constant contemplation of the diviner element is the chief means to a happy life.⁵ We must endeavor, therefore, always so to speak as to imply⁶ the priority of soul to matter,⁷ of design to reality,⁸ and of moral purpose to the material conditions on which it works.⁹ And on principle we shall allow to the material forces which, viewed in relation to beneficent design, seem, like the multitude compared with the philosopher, to work blindly and at random,¹⁰ only so much operation as will explain (1) the inevitable residuum of evil which design was unable to expel;¹¹ (2) the specific action of known secondary causes which may be treated as ministrant to design.¹²

¹ Cf. Tim. 29 D, 53 D, Phaedo 65 BC, Leges 897 D *ὡς νοῦν ποτὲ θνητοῖς ὀμμασιν ὀψόμενοι*.

² Tim. 27 D; cf. Phaedrus 274 A, Leges 672 B, 821 D *μέχρι τοῦ μὴ βλάσφημεῖν*.

³ Cf. 27 D, *πρῶτον διαιρετέον τάδε*; cf. Repub. 524 C, Phaedo 83, Phaedr. 245 E, Leges 897 B, Phileb. 28 D, Sophist 255 CDE, 247 B, 248; cf. *infra* on 75 D.

⁴ *οὐν* 48 A; cf. Polit. 269 D.

⁵ 46 E, 68 E, 87 C. Theaet. 176 E.

⁶ 30 E *δεῖ λέγειν*, 46 D *λεκτέον ψυχῇ*; cf. *supra* p. 400, 405.

⁷ 30 B, 34 C, 36 DE, 38 C, where stars are made before their *σώματα*, 40 A, 41 E, 43 A, 45 A, 69 C, 73 BCD the vital *μυελός* is shaped before the bony framework destined to contain it.

⁸ 30 A *λογισάμενος οὐν*, 34 A *λογισμὸς θεοῦ*, whence the Stoic *λόγος*; 34 A *ἐκ τέχνης γέγονεν*; cf. *πῦρ τεχνικόν*.

⁹ 45 A. The structure of head is designed to express the superiority of higher to lower, of front to back; cf. 69 E, where similar reasons determine the tripartite division of the body; cf. 47 AD for moral design in senses, 75 D purpose of mouth, 72 E of intestines.

¹⁰ *τὸ τυχὸν ἀτακτον* 46 E; *τὸ τῆς πλανωμένης εἶδος αἰτίας* 48 A; *ὅταν ἀπὴ τινὸς θεός* 53 B; *πλημμελῶς καὶ ἀτάκτως* 30 A; cf. the strange use of *ἐξ ἀνάγκης* 89 B; cf. *ὅτι ἂν τύχη* of vulgar love, Symp. 181 B and Protag. 353 B.

¹¹ Theaet. 176 A, Lysis. 221 A, Polit. 269 D, Tim. 37 D, 75 B, 42 A.

¹² *οἷς θεὸς ὑπερηρετοῦσι χρῆται* 46 C; cf. 68 E, 73 E, 76 C, 79 A *αἷς χρώμενον αἰτίαις*; cf. Phileb. 27 A.

The most noteworthy exemplifications of design are to be found in the movements and structure of the heavens,¹ and in human anatomy, especially in the organs that minister to the foresight of the soul (47 A, 75 E). The intelligence revealed in the heavens (τὸν . . . εἰρημένον ἐν τοῖς ἄστροις νοῦν, Leges 967 D) first roused the human mind from its corporeal stupor,² and its contemplation and intelligent study still affords the best intellectual discipline, the best sedative for the lower, the best stimulant to the higher element in the composite human soul.³ The reason that dwells in the stars can be fully apprehended only through pure mathematics, a science all-important as the basis of all accurate arts and sciences, and as the best propaedeutic to the higher dialectic.⁴ The generality of men and Greeks are swinishly ignorant of this science (Repub. 528 D, Leges 819 DE) and must be urged to its active pursuit. The exact relation of the human soul to this universal soul, the precise classification of its faculties and the discrimination of its mortal and immortal parts, are known only to God.⁵ In default of a divine revelation, the best human λόγος (cf. Phaedr. 85 D, Gorg. 527 A) will be the assumption of the antenatal existence of the higher intellectual soul, and of a Pindaric judgment whose dooms are pronounced, not by the caprices of the gods of the popular theogony, but through the operation of a self-acting law whereby soul ever rises and sinks in the scale of being according to desert.⁶ A like ignorance involves our conceptions of the gods.⁷ Our chief worship should be reserved for the supreme intelligence declared by the visible heavens,⁸ but no wise man will ever disturb the ἀκίνητα of popular belief except where necessary to proscribe doctrines dangerous to morality.⁹

¹ Cf. Leges 967 B, Repub. 530 AB, Tim. 33 D with Sophist 265 E, Tim. 38 C.

² Tim. 39 B, 47 A, Phaedr. 247 A, Epin. 978 D οὐρανὸς οὐδέποτε πάυεται διδάσκων . . . πρὶν ἂν καὶ ὁ δυναθέστατος ἱκανῶς μάθῃ.

³ 47 A, 90 D, Repub. 500 C.

⁴ Repub. 529 D, 525 D, Phileb. 57.

⁵ 72 D; cf. Phaedrus 246 A.

⁶ Tim. 92 B with Leges 904 B, Repub. 617 sqq., Phaedo 81-82.

⁷ Critias 107 B, Phaedr. 246 D; Tim. 40 E, Leges 899 AB.

⁸ Leges 930 E, τοὺς μὲν γὰρ τῶν θεῶν ὁρῶντες σαφῶς τιμῶμεν: cf. Tim. 41 A.

⁹ Leges 738 B, οὐδεὶς ἐπιχειρήσει κινεῖν νοῦν ἔχων: cf. 771 C, 772 C. Hence he has nothing to say against helpful superstitions 927 A, carelessly remarks of witchcraft οὐκ ἄξιον ἐπιχειρεῖν πείθειν 933 B, and accepts with a smile the genealogy of Hesiod, Tim. 42 E; but pronounces the popular belief in atonement by incense and burnt-offerings the worst of impieties, Leges 907 B.

In view of these facts we shall best enforce the essential analogy between the microcosm and the macrocosm, best satisfy our ethical postulates and comply with our canons of artistic probability, if we attribute the intelligence of the stars to an indwelling soul, and describe the elements and functions of that soul in terms studiously confounding the ordered movements of the heavens so far as understood and the chief categories of the higher cognitive faculties in man.¹

In the explanation of material things we accept the four elements from contemporary science, though they are obviously not elementary in any proper sense.² The only real elements involved in objects of sense are space and the mathematical relations. So far we accept the results of Democritus. But the atomists cannot really claim to have proved their specific doctrines with regard to the shapes and sizes of their atoms. The atomic chemistry has nothing to go upon but the obvious analogies between a smooth body and a soft sensation, or between a rough jagged body and a harsh sensation.³ In order, then, to maintain against the theory of flux and vortex, our principle that God geometrizes and introduces proportion and harmony wherever possible, we shall arbitrarily base our atoms on an *a priori* geometrical construction (53 DE). But we shall willingly yield the palm to the surer science that shall demonstrate a better method (54 A). Furthermore, the atoms of Democritus are particles of unqualified matter in space, and suffice in themselves for the production of all qualities. We recognize no abstract matter apart from space. Our atoms are purely mathematical relations. They explain only the connections and changes of things. The essential qualities that make each thing what it is are derived from the absolute eternal

¹ Cf. Archer-Hind on 90 D: "Plato frequently fuses in his language the symbol with what it symbolizes, the περιφορά with the διανόησις." Cf. 47 B, Repub. 500 C, Leges 897 A, 897 E ἢ προσέεικε κινήσει νοῦς, Tim. 39 C φρονιμωτάτης κυκλήσεως, 40 A εἰς τὴν . . . φρόνησιν, ibid. τὴν μὲν . . . αἰετὰ αὐτὰ ἐαντῷ διανοομένῳ, 89 A, 36 D ἄσχιστον εἴασε, cf. Sophist 221 E, 40 B πλάνην, 47 C πεπλανημένας, Phaedr. 263 B τὸ πλῆθος πλανᾶσθαι, etc. 45 D; cf. also infra note on 35 A, and compare with the terminology Sophist 249 A, 250 B, 254 D, 255 D, 258 B.

² Tim. 48 B. Perhaps because they are not γένεσιν τὴν περὶ τὰ πρῶτα, Leges 892 C.

³ 61 E, ὅτι—ὁξύ τι τὸ πάθος πάντες σχεδὸν αἰσθανόμεθα; cf. 60 A λείον, 56 A, 65 C; cf. Lucretius, de Rerum Nat. II 400-405, and Epicurus apud Diog. Laert.

idea.¹ We were forced to assume such fixed eternal unities in logic, and we cannot dispense with them here (51 B). In neither case are we able to state clearly how their virtue is infused into transient things.² Assuming these atoms and the cosmic agency of the Demiurgus, a few general forces will enable us to give a plausible analogical explanation of the chief phenomena brought before us.

Among these are the attraction of similar bodies (63 E, 53 A), the constant revolution of the heavens (58 A), which maintains a *plenium* (58 A, 79 B, 80 C), sets up a *περίωσις* (80 C, 79 C), and makes impossible a positive *actio in distans* (80 C, *ὁλκή μὲν οὐκ ἔστιν οὐδενί ποτε*); the far-reaching distinction between mobile and stable bodies (64 AB), and the principle of the stability of the homogeneous and the instability of the heterogeneous (57 A, 58 C). In human physiology and anatomy the prime fact is the distinction between the intellectual, emotional, and appetitive or vegetable soul, and our study should be directed to tracing the designs of our makers in providing instruments for the first, discipline for the second, and the necessary conditions for the harmonious working and due subordination of the third. Diseases are explicable on purely physical grounds; they are of the nature of living organisms, and are to be treated as far as possible by flexible regimen. Moral defect is in the main due to removable physical conditions (87 B). There is a certain continuity throughout the animal kingdom indicated by rudimentary organs (76 DE). The Democriteans evolve the higher from the lower by the operation of chance. Proof there is none, and we will therefore substitute for the guess of transmorphism the assertion of a metaschematism intentionally devised for ethical ends by the moral ruler of the world.

It will perhaps surprise the reader that, after protesting against the analysis of the Demiurgus into self-evolving thought, I have wholly ignored his personality in this abstract. But the fact is that the distinction between pantheism and theism was not a living

¹ Combine Sophist 247 D, where *ὄν* is defined as *δύναμις*, with Phileb. 29 C *πάση δυνάμει τῇ περὶ τὸ πῦρ οὖση*, Tim. 32 D, 33 A, 52 A. Compare also Zeller on Die Ideen als Kräfte, op. cit. 581 sqq.

² 50 C. The atomists reduce the ultimate qualities of things to two or three. Plato, applying his theory of ideas to this new theme, uses it to express the conviction of Mill and Schopenhauer, that infinite variety cannot be conjured out of homogeneity, and that the ultimate properties of things cannot be fewer in number than the irreducible differences which we perceive.

question for Plato. His theism is ethical. He employs theistic language in the manner of Cicero and Seneca, not with the attempted precision of Leibnitz and Malebranche. Reading his works simply and noting the things on which he lays stress, we see that the problems which preoccupied him were not those which the contemporaries of Spinoza were called upon to solve. Nothing is to be gained by confounding concrete historical differences in a common metaphysical formula.

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